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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/805,242	03/22/2004	Walter Hegel	2694-0144P	9065
2292 7590 02/08/2007 BIRCH STEWART KOLASCH & BIRCH PO BOX 747 FALLS CHURCH, VA 22040-0747			EXAMINER LEE, CHUN KUAN	
			ART UNIT 2181	PAPER NUMBER
SHORTENED STATUTORY PERIOD OF RESPONSE			NOTIFICATION DATE	
3 MONTHS			02/08/2007	
			DELIVERY MODE ELECTRONIC	

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary	Application No. 10/805,242	Applicant(s) HEGEL, WALTER	
	Examiner Chun-Kuan (Mike) Lee	Art Unit 2181	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-9 and 11-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7-9 and 11-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 March 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

RESPONSE TO ARGUMENTS

1. Applicant's arguments with respect to claims 1-5, 7-9 and 11-14 have been considered but are moot in view of the new ground(s) of rejection. Preceding objection of claim 14 is withdrawn. Rejections of claims 1-14 under 35 U.S.C. 112 second paragraph is withdrawn. Currently, claims 6 and 10 are cancelled and claims 1-5, 7-9 and 11-14 are pending for examination.

I. INFORMATION CONCERNING OATH/DECLARATION

Oath/Declaration

2. The applicant's oath/declaration has been reviewed by the examiner and is found to conform to the requirements prescribed in 37 C.F.R. 1.63.

II. INFORMATION CONCERNING DRAWINGS

Drawings

3. The applicant's drawings submitted are acceptable for examination purposes.

III. ACKNOWLEDGEMENT OF REFERENCES CITED BY APPLICANT

4. As required by M.P.E.P. 609(C), the applicant's submissions of the Information Disclosure Statement dated March 22, 2004 is acknowledged by the examiner and the cited references have been considered in the examination of the claims now pending.

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As required by **M.P.E.P 609 C(2)**, a copy of the PTOL-1449 initialed and dated by the examiner is attached to the preceding office action.

IV. OBJECTIONS TO THE CLAIMS

Claim Objections

5. Claims 1 and 14 are objected to because of the following informalities:

in claim 1, for the claimed limitation "a number of various flexible concepts are applied the operating machine" should be replace with -a number of various flexible concepts are applied to the operating machine-; and

the same objection is also applicable to the claimed limitation for claim 14.

Appropriate correction is required.

V. REJECTIONS BASED ON PRIOR ART

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-4, 7-9 and 11-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Yonekura (US Patent 4,510,570) in view of Jensen et al. (US Patent 4,817,009).

7. As per claims 1 and 14, Yonekura teaches a safety control bus system and method for a press comprising:

at least one sensor configured (rotary pulse encoder 27 of Fig. 1) to sense operation characteristic of a respective machine component (e.g. crankshaft) in an operating machine (e.g. pressing operating machine) (col. 2, ll. 7-15 and col. 2, ll. 28-36), wherein the rotary pulse encoder sense by detecting the rotational angle corresponding to the crankshaft;

at least one actuator configured (e.g. driving mean) to actuate said respective machine component (col. 2, ll. 7-15 and col. 2, ll. 28-36);

at least one safety function (e.g. emergency stop) (Fig. 5A);

at least one bus controller (microcomputer 3 of Fig. 1) configured to control the respective machine components (col. 3, ll. 20-54 and col. 4, ll. 49-58);

at least one bus line interconnecting the at least one sensor and the at least one actuator and the at least one bus controller (Fig. 1-2), wherein the plurality bus lines are utilized for inputting and outputting signals between the at least one sensor and the at least one actuator and the microcomputer;

wherein when the safety function is selected, the bus controller variable controls the respective machine components based on the sensed operational characteristics and a type of the safety function (Fig. 5A and col. 4, ll. 49-58), wherein the safety function is selected by the microcomputer as the microcomputer initiated the stop signal for the emergency stop based on the detection of the rotational angle corresponding to the crankshaft.

Yonekura does not expressly teach the safety control bus system and method for the press comprising:

- a plurality of first bus-capable modules;
- at least one second bus capable module; and
- a number of various flexible concepts are applied to the operating machine.

Jensen teaches a system and a method comprising

a plurality of first temperature controllers (e.g. first bus-capable modules) (Fig. 1, ref. 80, 82, 84, 86), each being connected to at least one temperature sensing device resides within the conduit means (Fig. 1, ref. 16, 18, 20, 22) and at least one control valve (e.g. actuator) (Fig. 1, ref. 150, 152, 154, 156) (col. 5, ll. 1-59);

at least one second temperature controller (e.g. second bus capable module) (Fig. 1, ref. 102) connected to at least one safety function (col. 5, l. 60 to col. 6, l. 16), wherein the second temperature controller is connected to the limit block (Fig. 2, ref. 176) which implements the safety function associated with temperature (col. 7, ll. 9-14);

at least one bus controller (Fig. 1, ref. 120, 122, 124, 126) configured to control the components via the corresponding first temperature controllers (e.g. first bus-capable modules) (Fig. 1, ref. 80, 82, 84, 86) as signals are outputted to the corresponding control valve (Fig. 1, ref. 150, 152, 154, 156) (col. 5, ll. 1-59); and

at least one bus line interconnecting the first and second temperature controller (e.g. first and second bus-capable modules) and the at least one bus controller (Fig. 1, ref. 182, 184, 186, 188, 106),

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Jensen's first and second controllers into Yonekura's safety control bus system and method. The resulting combination of the references further teaches the safety control bus system and method for the press (e.g. tableting machine) comprising:

the plurality of first controllers (e.g. first bus-capable modules), wherein each first controller is connected to at least one sensor and at least one actuator;

at least one second controller (e.g. second bus capable module) connected to the safety function, wherein the safety function is associated to either temperature or position of the actuator, therefore providing the plurality of various flexible safety concepts that are applied to the operating machine;

at least one bus controller controlling the corresponding machine components through the corresponding first controller (e.g. first bus-capable modules); and

at least one bus line interconnecting the first and second controller and the at least one bus controller.

Therefore, it would have been obvious to combine Jensen with Yonekura for the benefit of implementing a more robust control for the bus system by utilizing a master signal in combination with a plurality of independent tracking signals (Jensen, col. 1, l. 64 to col. 2, l. 9).

8. As per claim 2, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where Jensen further teaches the safety bus system comprising

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wherein signals on the bus line are analog signals (Jensen, col. 3, ll. 22-29), wherein the bus controller is an analog computer, therefore the signal processed would be analog signal.

9. As per claim 3, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where Jensen further teaches the safety bus system comprising wherein signals on the bus line are digital signals (Jensen, col. 3, ll. 22-29), wherein the bus controller is an digital computer, therefore the signal processed would be digital signal.

10. As per claim 4, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where both further teach the safety bus system comprising wherein the safety function is at least one from a safety window, an enclosure switch or an emergency stop (Yonekura col. 4, ll. 49-58 and Jensen, col. 7, ll. 9-14 and), wherein the safety function includes the limit block have the safety window defied by the high and low limit values and the emergency stop.

11. As per claim 7, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where both further teach the safety bus system comprising wherein the safety function is a switch, a button, or an emergency off switch (Yonekura, col. 4, ll. 49-58 and Jensen Fig. 2, ref. 172), as the safety function is the switch or the emergency off switch.

12. As per claims 8-9, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where Jensen further teaches the safety bus system comprising wherein at least one from the first and second bus capable modules further includes at least one signaling mechanism, wherein the at least one signaling mechanism produces an optical, acoustic or mechanical signal (Jensen, col. 3, ll. 15-18), wherein the signaling means produce mechanical signal.

13. As per claim 11, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where Jensen further teaches the safety bus system comprising wherein the actuator comprise electromechanical, electromagnetic, piezoelectric, pneumatic, or hydraulic actuator (Jensen, col. 3, ll. 65-68).

14. As per claim 12, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where both further teach the safety bus system comprising wherein the at least one bus line is electrical, optical, or radio-controlled (Yonekura, Fig. 1-2 and Jensen, col. 3, ll. 2-3), wherein the bus line is electrical.

15. As per claim 13, Yonekura and Jensen teach all the limitation of claim 1 as discussed above, where Jensen further teaches the safety bus system comprising wherein the at least bus line include at least one signaling line (Jensen, Fig. 1, ref. 70,

90; col. 4, ll. 63-67 and col. 5, ll. 15-27), wherein the signal line is the control signaling line (Jensen, Fig. 2, ref. 90) or the sensor signaling line (Jensen, Fig. 1, ref. 90).

16. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Yonekura (US Patent 4,510,570) and Jensen et al. (US Patent 4,817,009), and further in view of Ishii (US Patent 5,379,688).

Yonekura and Jensen teach all the limitation of claim 1 as discussed above.

Yonekura and Jensen do not expressly teach the safety bus system comprising wherein the first and second bus-capable modules further comprise a display configured to display information to an operator.

Ishii teaches the pressing machine system and method comprising a LED display (Fig. 4, ref. 79, 81) utilized for displaying information including mode of operation and data (col. 5, 36-42).

It would have been obvious to one of ordinary skill in this art, at the time of invention was made to include Ishii's LED display into Yonekura and Jensen's first and second bus-capable. The resulting combination of the references further teaches the safety bus system comprising wherein the first and second bus-capable modules further comprise the LED display configured to display information such as mode of operation and data to an operator.

Therefore, it would have been obvious to combine Ishii with Yonekura and Jensen for the benefit of automatic controlling to prevent occurrence of pressing a defective product (col. 2, ll. 19-23).

VI. CLOSING COMMENTS

Conclusion

a. STATUS OF CLAIMS IN THE APPLICATION

The following is a summary of the treatment and status of all claims in the application as recommended by **M.P.E.P. 707.07(i)**:

a(1) CLAIMS REJECTED IN THE APPLICATION

Per the instant office action, applicant's amendment necessitated the new ground(s) of rejection presented in this Office action, therefore claims 1-5, 7-9 and 11-14 have received a **FINAL ACTION** on the merits. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

b. DIRECTION OF FUTURE CORRESPONDENCES

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chun-Kuan (Mike) Lee whose telephone number is (571) 272-0671. The examiner can normally be reached on 8AM to 5PM.

IMPORTANT NOTE

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Donald Sparks can be reached on (571) 272-4201. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

February 01, 2007

Chun-Kuan (Mike) Lee
Examiner
Art Unit 2181



DONALD SPARKS
SUPERVISORY PATENT EXAMINER